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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,955	11/12/1999	RICKARD MARKS VON WURTEMBERG	21513	1076

7590

12/17/2003

LAWRENCE E. LAUBSCHER, JR.  
1160 SPA ROAD  
SUITE 2B  
ANNAPOLIS, MD 21403

EXAMINER

JACKSON, CORNELIUS H

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/438,955

Applicant(s)

VON WURTEMBERG ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

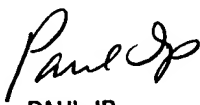
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Acknowledgment*

1. Acknowledgment is made that applicant's Amendment, filed on 23 September 2003, has been entered. Upon entrance of the amendment, claims 18 and 23 were amended and claims 26-29 were canceled. Claims 18-25 are now pending in the current application.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18-<sup>25</sup>~~29~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. "Optically transparent indium-tin-oxide (ITO) ohmic contacts in the fabrication of vertical-cavity surface-emitting lasers" in view of Imai et al. (5706117) and/or Yanagawa (5287367). Martin et al. teach a bottom-emitting vertical cavity surface emitting cavity laser comprising a substrate permitting the passage of light therethrough; a laser stack consisting essentially of a high reflectivity mirror, a low

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reflectivity mirror, and an active light-amplifying region located between the high and low reflectivity mirrors, said laser stack being provided on said substrate with said low reflectivity mirror adjacent said substrate; a light output port located in said substrate adjacent the low reflectivity mirror for transmitting light emitted by the active light-amplifying region and constituting an output of the laser; and an ohmic contact provided on the high reflectivity mirror, the ohmic contact being photon transparent for transmitting some of the light emitted by the light amplifying region that passes through the high reflectivity mirror, **see paragraphs 1-2 (Introduction and Fabrication)**. Martin et al. fails to disclose for monitoring the light emitted by the light amplifying region that passes through the high reflectivity mirror with an external photodetector. Imai et al. (**see Fig. 2**) and Yanagawa (**see Figs. 3-9**) teach monitoring the light emitted by the light amplifying region that passes through the high reflectivity mirror with an external photodetector is well known and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 21 and 23, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 19, 20, 24 and 25, Martin et al. teach all the stated limitations, **see paragraphs 1-2 (Introduction and Fabrication)**.

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Regarding claim 22, "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

### ***Response to Arguments***

4. Applicant's arguments filed 23 September 2003 have been fully considered but they are not persuasive.

5. In response to applicant's argument that, "Martin uses ITO contact on both mirrors, in the vacuum of purely research context, for its electrical properties and did not teach the possibility that it could be used in a monitoring device"(paraphrased), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

6. In response to applicant's argument that, "it is clear from the description and drawings that both Imai and Yanagawa relate to edge-emitting lasers and not surface-emitting lasers", it is not clear from the description and drawings that both Imai and Yanagawa relate to edge-emitting lasers and not surface-emitting lasers. Although from the drawings in Yanagawa, the semiconductor laser may appear to be an edge-emitting laser, the specification teaches a semiconductor laser used for devices such as

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compact/laser disk, **col. 1, lines 6-10**. As for Imai, neither the drawings nor specification teach the laser to be edge-emitting lasers and not surface-emitting lasers, instead Imai teach a semiconductor laser diode with APC equivalent to the laser of Kim (EPO 803943 A2) which is a surface *emitting* laser diode. Also Kim teaches the use of such a laser is for compact disk.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981 [(703) 272-1942, after January 2004]. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098 [(703) 272-1941, after January 2004]. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

*CHJ*

chj

*Paul Ip*

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